AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application.

Listing of Claims:

1-14. (Canceled)

15. (Twice Amended) A method for detecting the presence of bacterial poly glutamic acid (PGA) ~~or staging anthrax infection~~ in a vertebrate of interest, said method comprising detecting a level of soluble PGA ~~poly $_{\gamma D}$ glutamic acid ($_{\gamma D}$ PGA)~~ in a biological sample from said vertebrate, wherein the level of said soluble PGA ~~$_{\gamma D}$ PGA~~ is indicative of bacterial infection by PGA-producing pathogens ~~anthrax infection, or stage thereof,~~ in said vertebrate.

16. (Twice Amended) The method according to claim 15, wherein the level of said soluble PGA ~~$_{\gamma D}$ PGA~~ is detected by an immunoassay.

17. (Original) The method according to claim 16, wherein the immunoassay is a competitive assay.

18. (Original) The method according to claim 16, wherein the immunoassay is in a direct format.

19. (Original) The method according to claim 15, wherein the vertebrate is a human, and the biological sample is a blood sample.

20. (Canceled)

21. (Twice Amended) The method according to claim 19, further comprising comparing the level of said soluble PGA ~~$_{\gamma D}$ PGA~~ in the biological sample to a reference level of said soluble PGA ~~$_{\gamma D}$ PGA~~, wherein said reference level is an average level of soluble PGA ~~$_{\gamma D}$ PGA~~ in blood samples from humans who have not been infected by said PGA-producing pathogen ~~*Bacillus anthracis*~~.

22-32. (Canceled)

33. (Twice Amended) A method for detecting the presence of poly glutamic acid (PGA) ~~or staging anthrax infection~~ in a vertebrate of interest, comprising contacting a

biological sample prepared from said vertebrate with an anti-PGA antibody to detect ~~a level of~~ soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample, wherein the level of soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample is indicative of bacterial infection by PGA-producing pathogens ~~anthrax infection, or stage thereof,~~ in said vertebrate.

34. (Twice Amended) The method of claim 33, comprising comparing the level of soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample to a reference level of soluble PGA $_{\gamma D}$ ~~PGA~~, wherein said reference level is an average level of soluble PGA $_{\gamma D}$ ~~PGA~~ in blood samples from reference vertebrates.

35. (Previously Presented) The method of claim 33, wherein said biological sample is a serum sample.

36. (Previously Presented) The method of claim 33, wherein said vertebrate is a human.

37. (Previously Presented) The method of claim 36, wherein said biological sample is a body fluid sample.

38. (Canceled)

39. (Twice Amended) The method of claim 37, wherein the level of said soluble PGA $_{\gamma D}$ ~~PGA~~ is detected by an antigen capture immunoassay.

40. (Twice Amended) A method for detecting ~~anthrax~~ infection by a PGA-producing bacterium in a vertebrate of interest, said method comprising:

contacting a biological sample prepared from said vertebrate with an anti-PGA antibody; and

detecting a level of soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample,

wherein the level of soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample is indicative of said ~~anthrax~~ infection in said vertebrate.

41. (Previously Presented) The method of claim 40, wherein said biological sample is a body fluid sample.

42. (Previously Presented) The method of claim 41, wherein said body fluid sample is a blood sample.

43. (Previously Presented) The method of claim 41, wherein said vertebrate is a mammal.

44. (Previously Presented) The method of claim 41, wherein said vertebrate is a human.

45. (Currently Amended) The method of claim 44, wherein the level of soluble PGA $_{\gamma D}$ ~~PGA~~ is detected by an immunoassay.

46. (Previously Presented) The method of claim 45, wherein said immunoassay is selected from the group consisting of an ELISA, an RIA, a lateral flow assay, a particle agglutination assay, a sandwich assay, and a protein chip assay.

47. (Previously Presented) The method of claim 45, wherein said immunoassay is an antigen capture immunoassay.

48. (Previously Presented) The method of claim 45, wherein said immunoassay is a non-competitive assay.

49. (Previously Presented) The method according to claim 45, wherein said immunoassay is in a direct assay format.

50. (Canceled)

51. (Twice Amended) A method for evaluating progression of ~~anthrax~~ infection by a PGA-producing bacterium in a vertebrate of interest, said method comprising:

contacting a biological sample prepared from said vertebrate with an anti-PGA antibody; and

detecting a level of soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample,

wherein the level of soluble PGA $_{\gamma D}$ ~~PGA~~ in said biological sample is indicative of the progression of said ~~anthrax~~ infection in said vertebrate.

52. (Previously Presented) The method of claim 51, wherein said biological sample is a body fluid sample.

53. (Previously Presented) The method of claim 52, wherein said body fluid sample is a blood sample.

54. (Previously Presented) The method of claim 52, wherein said vertebrate is a mammal.

55. (Previously Presented) The method of claim 52, wherein said mammal is human.

56. (Twice Amended) The method of claim 55, wherein the level of soluble PGA ~~γD-PGA-~~ is detected by an immunoassay.

57. (Previously Presented) The method of claim 56, wherein said immunoassay is selected from the group consisting of an ELISA, an RIA, a lateral flow assay, a particle agglutination assay, a sandwich assay, and a protein chip assay.

58. (Previously Presented) The method of claim 56, wherein said immunoassay is an antigen capture immunoassay.

59. (Previously Presented) The method of claim 56, wherein said immunoassay is a non-competitive assay.

60. (Previously Presented) The method of claim 56, wherein said immunoassay is in a direct format.

61. (Canceled)